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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/843,875

04/30/2001

Kazumi Tabuchi

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01/13/2006

BIRCH STEWART KOLASCH & BIRCH

PO BOX 747

FALLS CHURCH, VA 22040-0747

EXAMINER

PHAM, THIERRY L

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/843,875	Applicant(s) TABUCHI, KAZUMI	
	Examiner Thierry L. Pham	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 10/14/05.
- Claims 1-18 are pending.
- Amendment to the Abstract and Specification has been considered and entered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori (U.S. 5847726), and in view of Mizutani (U.S. 6078400).

Regarding claim 1, Hori discloses an ink-jet printer system (inkjet printing system, fig. 3) wherein the ink-jet printer (printer 1, fig. 3) is provided with a storage means (RAM 24 for storing completion of last printed operation (latest printing time S2), fig. 4, col. 3, lines 6-30 and cols. 8, lines 15-35 and cols. 9-10, the latest printing time must be stored prior for retrieval) which updates and stores the completion time of the last printing operation (latest printing time and present time, fig. 4, and also notes second period as shown in fig. 4 is computed by subtracting last printing time from present time) and each host machine (host computer 30, fig. 3) is provided with a print control means (host computer includes a CPU 31 of fig. 3 for controlling the operation of the printers and reads out completion time of last printed operation, fig. 7) which reads out the completion time from the ink-jet printer at the start of a printing operation (recovery process starts at a beginning of a printing operation, fig. 7), compares it with the current time (comparing the current time with the time of last printed operation, fig. 7, cols. 9-10) and selectively issues an execution order of a recovery treatment (i.e. purging/flushing

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operations/tasks based upon the comparison results, fig. 7, cols. 9-10) to the ink-jet printer based on the result of the comparison.

Hori discloses the inkjet printing system as shown in fig. 3, but fail to teach an ink-jet printer is shared by multiple number of host machines/computers.

Mizutani, in the same field of endeavor for ink-jet printing system, teaches that it is well known in the art at the time of the invention to have an ink-jet printer shared by multiple number of host machines/computers (ink-jet printer 3 is shared with multiple client apparatuses 1-2, fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the inkjet printer of Mori to be shared by multiple number of host machines as per teachings of Mizutani because of the following reasons: (a) to allow an inkjet printer to be shared with multiple of users, therefore, reducing hardware costs; (b) to improve versatility.

Therefore, it would have been obvious to combine Mori with Mizutani to obtain the invention as specified in claim 1.

Regarding claim 2, Hori further teaches the ink-jet printer according to claim 1, wherein the print control means (host computer, fig. 3) includes a time measuring means (real time clock 35, fig. 3) for measuring the current time and transfers the current time measured by the time measuring means at the end of a printing operation to the ink-jet printer as the completion time of the printing operation (current time and last printed completion time, col. 6, lines 15-40).

Regarding claims 3-4, Hori further teaches the ink-jet printer according to claim 1, wherein the print control means determines whether or not the completion time of the last printing operation read out from the ink-jet printer is valid (determine whether the last printed operation time was accurately recorded, col. 10, lines 40-67+) and gives an execution order of a recovery treatment (i.e. purging/flushing operations/tasks based upon the comparison results, fig. 7, cols. 9-10) if the completion time is invalid (invalid time, fig. 8, col. 11, lines 28-47).

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Regarding claims 5-7, Hori further teaches the ink-jet printer according to claim 1, wherein if the completion time which was read from the ink-jet printer at the end of the last printing operation indicates a later time than the current time (last printed operation time is later than the current time read from the host computer, col. 10, lines 40-67+), the print control means issues to the ink-jet printer a command of prohibiting (update is not necessary due to inaccuracy of time recorded, cols. 10-11) the update of the completion time held in the storage means.

Regarding claims 8-16, Hori further teaches the ink-jet printer according to claim 1, wherein if the completion time which was read from the ink-jet printer at the end of the last printing operation indicates a later time than the current time, the print control means informs that fact to other host machines and provides warning (informs users to update host computer's time to reflect the correct current time, col. 10, lines 40-67+).

Regarding claim 17, Hori further teaches the ink-jet printer according to claim 2, further comprising: a clock server (host computer includes a real time clock, fig. 6) for indicating the current time, wherein the print control means reads the current time from the clock server at regular intervals and updates the current time measured by the time measuring means based on the read current time.

Regarding claim 18, Hori further teaches the ink-jet printer according to claim 1, further comprising: a clock server (host computer includes a real time clock, fig. 6) for indicating the current time, wherein the storage means updates and stores the current time indicated by the clock server at the printing operation end as the completion time of the last printing operation (current and last printed completion time, fig. 4).

Response to Arguments

Applicant's arguments, see page 10, filed 10/14/05 with respect to claims 3-4 have been fully considered and are persuasive. The 112, 2nd paragraph rejection of claims 3-4 has been withdrawn.

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Applicant's arguments filed 10/14/05 with respect to prior art rejection 103(a) have been fully considered but they are not persuasive.

- Regarding claim 1, the applicant argued the combined reference (US 5847726 to Hori and US 6078400 to Mizutani) fail to suggest and/or teach “each host machine includes a print control means for reading out the completion for the ink-jet printer at the start of a printing operation”.

In response, the examiner fully disagrees with the applicant's assertions. Limitations/features as cited in claim 1 simply indicates each host machine includes a print control means for reading and performing execution order of a recovery treatment. On page 18, lines 5-7 of the original filed specification teaches that host PCS 3b and 3c are configured (i.e. each having a print control means) in the same manner as host PC 3a. Hori teaches a host machine (host computer 30, fig. 3) is provided with a print control means (host computer includes a CPU 31 of fig. 3 for controlling the operation of the printers and reads out completion time of last printed operation, fig.7) which reads out the completion time from the ink-jet printer at the start of a printing operation (recovery process starts of a beginning of a printing operation, fig. 7), compares it with the current time (comparing the current time with the time of last printed operation, fig. 7, cols. 9-10) and selectively issues an execution order of a recovery treatment (i.e. purging/flushing operations/tasks based upon the comparison results, fig. 7, cols. 9-10) to the ink-jet printer based on the result of the comparison. Mori fails to teach a printing system having a plurality of host computers that configured in the same manner (i.e. each having a printing control means), which shared a single ink-jet printer. It is well known in the art that all PCs connected in a network can be configured in the same manner (i.e. each having a print control means) and shared a single ink-jet printer. Mizutani teaches client apparatuses 1 & 2 of fig. 1 are both having the same configuration and structure (col. 5, lines 48-50) and both are sharing a single ink-jet printer 3. Sharing a single ink-jet printer in a network reducing the needs of an additional printer, therefore, reducing hardware costs. Having all networked PCs configured in the same configurations/structures provide a better versatility, for example, if one PC is failed, a substitute PC having the same function can be replaced to perform operations of the failed PC.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents/publications are relevant to applicant's disclosure invention.

- 6388758 to Kawanabe et al, teaches a system for scheduling an event (i.e. print head cleaning) in a device based on elapsed time from the last printed completion time.
- 6398336 to Yoda et al, teaches a system for scheduling an event (i.e. print head cleaning) in a device based on an elapsed time from the last printed completion time.
- 5475404 to Takahashi et al, teaches a system for scheduling an event (i.e. recovery operation such as print head cleaning, suction, capping, and etc) in a device based on an elapsed time from the last printed completion time.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

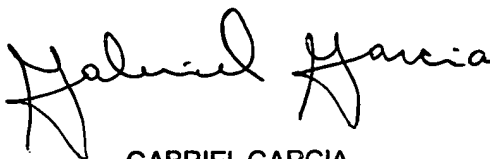
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham



GABRIEL GARCIA
PRIMARY EXAMINER